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ABSTRACT

This report describes 1976-77 student enrollment trends, student and staff characteristics, assessment and placement procedures, and program costs for Seattle, Washington's special education program for the handicapped. The study's objectives were: (1) to compare current special education enrollment within and across programs with enrollment of past years; (2) to describe demographic characteristics of students enrolled in special education programs within and across programs; (3) to describe current special education assessment, placement and intervention practices; (4) to describe special education teaching staff in regard to sex, age, ethnic group, and educational background; and (5) to determine the cost per pupil enrolled in each special education program. The report states objectives one and four were fully met, and the remaining objectives were only partially met because of the lack of an adequate data storage and retrieval system. (Author/APM)

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A DESCRIPTIVE ANALYSIS OF SPECIAL EDUCATION IN SEATTLE PUBLIC SCHOOLS

REPORT NO. 77-10
JUNE, 1977

MADELAINE RAMEY
JIM JAMES

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Administrative and Service Center
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A DESCRIPTIVE ANALYSIS OF SPECIAL EDUCATION IN SEATTLE PUBLIC SCHOOLS

REPORT NO. 77-10
JUNE, 1977

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ABSTRACT

A Descriptive Analysis of Special Education in Seattle Public Schools, Report No. 77-10, presents data gathered during the 1976-77 school year in response to requests from the District's Division of Instructional Services.

The report represents an extensive effort to describe student enrollment trends, student and staff characteristics, assessment and placement procedures, and program costs relative to Seattle's programs for the handicapped.

Five major recommendations are offered based upon findings of the study:

1. Due to a substantial over-representation of males in the Neurologically Impaired, Learning/Language Disabled and Behaviorally Disabled categories, it is recommended that assessment and placement practices be reviewed for assurance that such practices are not sexually discriminatory for these categories.

2. Due to a substantial over-representation of Black students in the Mildly Retarded, Moderately Retarded and Behaviorally Disabled categories, it is recommended that assessment and placement practices be reviewed for assurance that such practices are not ethnically discriminatory for these categories.

3. Reasoning that over-representations of students from non-intact (mother and father not both present) and low-income families in the Mildly Retarded and Behaviorally Disabled categories suggest contributions to handicapping conditions through lack of home stimulation for intellectual and emotional growth, it is recommended that particular emphasis be placed on involving the parent or guardian in these students' educational programming.

4. Due to increasing demands for program evaluation and status monitoring information and the fact that current manual systems do not adequately address these data needs, it is recommended that a computerized data storage and retrieval system be developed to include, as a minimum, ready (one-day) access to the following information on each student:

   a. Standard descriptive and demographic data on students and staff.

   b. Special Education and other program placement history.

   c. Indicators for the occurrence of all compliance-related transactions.

   d. Standard basic assessment battery measures.

   e. Ongoing standard performance measures.

5. Since program cost-effectiveness is an increasingly important pursuit in Special Education as well as other District areas, it is recommended that a program budget structure be developed which allows precise analysis of per student costs in terms of meaningful program units.

TABLE OF CONTENTS

	Page
ABSTRACT	ii
LIST OF TABLES	iv
LIST OF FIGURES	vi
INTRODUCTION	1
PURPOSE AND PROCEDURES	3
RESULTS AND DISCUSSION	5
SUMMARY AND RECOMMENDATIONS	51

LIST OF TABLES

Page

TABLE 1: Handicap Enrollment by School Year 6

TABLE 2: Percent Handicapped in Total School Populations. 9

TABLE 3: Sex Representation of Students Within and Across Handicap Categories 12

TABLE 4: Ethnic Representation of Students Within and Across Handicap Categories 13

TABLE 5: Comparison of Seattle's Mildly Mentally Retarded Ethnic Representation with that in Four Other School Districts. 15

TABLE 6: Incidence of Non-English Language Background Within and Across Handicap Categories. 16

TABLE 7: Living-With (Both Parents vs. Other) Status Frequencies Within and Across Handicap Categories. 17

TABLE 8: Estimated Percent of Students from Families with Annual Incomes Below Poverty Level Within and Across Handicap Categories. 19

TABLE 9: Grade Level (Elementary vs. Secondary) Representation Within and Across Handicap Categories. 21

TABLE 10: Means and Standard Deviations of Ages (In Years) of Students Within and Across Handicap Categories. 22

TABLE 11: School of Attendance (Home vs. Other) Within and Across Handicap Categories. 23

TABLE 12: Modes of Transportation Within and Across Handicap Categories. 25

Page

TABLE 13: Comparison of High School Disadvantagedness Indices with a Geographic Concentration of Mildly Mentally Retarded Students. 28

TABLE 14: Percentage of Each Sex Placed in Resource Rooms, Self-Contained Classrooms or Receiving Contractual Services 34

TABLE 15: Percentage of Each Ethnic Group Placed in Resource Rooms, Self-Contained Classrooms or Receiving Contractual Services 35

TABLE 16: Means and Standard Deviations of Ages (in Years) of Students Placed in Resource Rooms, Self-Contained Classrooms or Receiving Contractual Services 37

TABLE 17: Percentage of Students Receiving Special Education Related Services While in Regular Classes Within and Across Handicap Categories. 39

TABLE 18: Sex Representation of Special Education Teaching Staff Within and Across Handicap Categories 41

TABLE 19: Ethnic Representation of Special Education Teaching Staff Within and Across Handicap Categories. 43

TABLE 20: Means and Standard Deviations of Ages (in Years) of Special Education Teaching Staff Within and Across Handicap Categories. 44

TABLE 21: Means and Standard Deviations of Years' Teaching Experience of Special Education Teaching Staff Within and Across Handicap Categories 45

TABLE 22: Frequency of Type of Certification Within and Across Handicap Categories 47

TABLE 23: Frequencies of Highest Degree Held by Special Education Teaching Staff Within and Across Handicap Categories. 48

TABLE 24: Cost (in Dollars) Per Pupil Per Year 49

LIST OF FIGURES

		Page
FIGURE 1:	Handicap Enrollment Trends Over a Five-Year Period.	7
FIGURE 2:	Geographic (By Nearest High School) Concentration of Mildly Retarded Students	26
FIGURE 3:	Geographic (By Nearest High School) Concentration of Behaviorally Disabled Students	29
FIGURE 4:	Geographic (By Nearest High School) Concentration of Learning/Language Disabled Students	30
FIGURE 5:	Cost Per Pupil Trends Over Time for Regular and Special Education	50

INTRODUCTION

Seattle's Special Education program is a multi-million dollar effort serving over 3,000 students in eleven categories of physical, mental and emotional handicaps and employing well over 300 professional and clerical staff.

In addition to information required for the internal management of such an effort, there is an increasing need for analyses which relate to Federal and State rules and regulations.

This report has been prepared in response to a series of questions raised by the Instructional Services Division early in the 1976-77 school year. While it was possible to address the majority of the questions, some were not completely answerable because data were not available in a form suitable for such analyses. It is hoped that appropriate decision-makers will be stimulated to encourage the development of data systems which can efficiently supply answers to those unanswered questions which are considered important for program management.

Overview

The remaining sections of the report include a Procedures chapter which describes methods used for data gathering and analysis, a Results chapter which interprets the findings of the study, and a Summary and Recommendations chapter which offers some possible courses of action pursuant to needs identified in earlier sections.

PURPOSE AND PROCEDURES

This report describes the results of research conducted for the Instructional Services Division by the Evaluation and Testing Office during the 1976-77 school year. The study was addressed to the following objectives:

1. To compare current Special Education enrollment within and across programs with past years' enrollments.

2. To describe demographic characteristics of students enrolled in Special Education programs within and across programs.

3. To describe current Special Education assessment, placement and intervention practices.

4. To describe the Special Education teaching staff in terms of selected demographic characteristics.

5. To determine the current cost per pupil enrolled in each Special Education program.

Five sources of information were utilized in working toward the above objectives: District computer files, records kept for reports to the State Superintendent of Public Instruction, the most current District Annual Report, census data, and interviews with selected administrative personnel.

RESULTS AND DISCUSSION

In presenting the results, each of the preceding objectives will be considered in turn.

Comparison of Current Special Education Enrollment Within and Across Programs with Past Years' Enrollments

Table 1* gives enrollment figures within and across handicap programs for the current school year (1976-77) and for the four preceding school years. The unenclosed numbers are raw frequencies, the numbers in square brackets are percentages of total handicapped enrollment for a given school year, and the numbers in parentheses are percentages of total District enrollment for a given school year. Thus, referring to the first row and fifth column of Table 1, 162 is the number of Neurologically Impaired students in the 1976-77 school year, 5.5 is the percentage of Neurologically Impaired out of the total number (2,931) of handicapped students in 1976-77, and .26 is the percentage of Neurologically Impaired of the total number (61,762) of students in the District in 1976-77.

Inspection of Table 1 reveals some noteworthy trends over time: first, with respect to the percent handicapped enrollment (column 12) of the total District enrollment; and second, within the categories Multiple Handicapped (column 6), Behaviorally Disabled** (column 10), Mildly Mentally Retarded (column 8), and Learning/Language Disability (column 11). The percent handicapped enrollment increases steadily from 2.9% of the total District population in 1972-73 to 5.0% in 1975-76 with a slight decrease to 4.7% in the current year, 1976-77, a decrease probably due to the decline in the Behaviorally Disabled enrollment for this year.

The trends within the four aforementioned handicap categories may be more easily discerned when graphed as in Figure 1, which shows what percentage of the total handicap enrollment is taken up by a given handicap category for each year. Referring to Figure 1, a steady decrease in the Multiple Handicapped enrollment can be seen. This decrease probably reflects a growing tendency stimulated by State interpretations of rules and regulations (WAC 392-171) to place students according to their most severe handicapping condition rather than in the Multiple Handicapped category.

---

*Based on Special Education enrollment reports submitted to the State Superintendent of Public Instruction.

**Formerly Emotionally Disturbed.

TABLE 1

HANDICAP ENROLLMENT BY SCHOOL YEAR

School Year	Handicap												Total Enrollment
	Sensory Handicapped Partially Sighted	Sensory Handicapped, Blind	Sensory Handicapped, Hearing Impaired	Gross Motor and Orthopedically Impaired	Neurologically Impaired	Multiple Handicapped	Mentally Retarded, Severely and Profoundly	Mentally Retarded, Mildly	Mentally Retarded, Moderately	Behaviorally Disabled*	Learning/ Language Disabled	Total Handicapped	
1976-77	6 [.2] (.01)	3 [.1] (.01)	147 [5.0] (.23)	41 [1.4] (.07)	162 [5.5] (.26)	196 [6.7] (.32)	44 [1.5] (.07)	501 [17.1] (.81)	160 [5.5] (.26)	549 [18.7] (.89)	1,067 [36.4] (1.73)	2,931 (4.75)	61,762
1975-76	9 [.3] (.01)	17 [.5] (.03)	137 [4.2] (.21)	23 [.7] (.04)	154 [4.7] (.23)	250 [7.6] (.38)	64 [1.9] (.10)	541 [16.4] (.82)	129 [3.9] (.19)	1,039 [31.6] (1.57)	930 [28.2] (1.41)	3,293 (4.98)	66,125
1974-75	12 [.4] (.02)	10 [.3] (.01)	193 [6.2] (.28)	30 [1.0] (.04)	127 [4.1] (.18)	287 [9.3] (.41)	24 [.8] (.04)	609 [19.6] (.88)	152 [4.9] (.22)	936 [30.2] (1.35)	721 [23.2] (1.04)	3,101 (4.48)	69,201
1973-74	4 [.2] (.01)	14 [.5] (.02)	176 [6.7] (.24)	20 [.8] (.03)	95 [3.6] (.13)	344 [13.1] (.48)	32 [1.2] (.04)	566 [21.6] (.79)	114 [4.4] (.16)	711 [27.2] (.99)	540 [20.6] (.75)	2,616 (3.63)	72,037
1972-73	9 [.4] (.01)	33 [1.5] (.04)	168 [7.7] (.22)	0	104 [4.8] (.14)	345 [15.9] (.46)	**	660 [30.5] (.88)	**	355 [16.4] (.47)	390 [18.0] (.52)	2,167 (2.89)	74,951

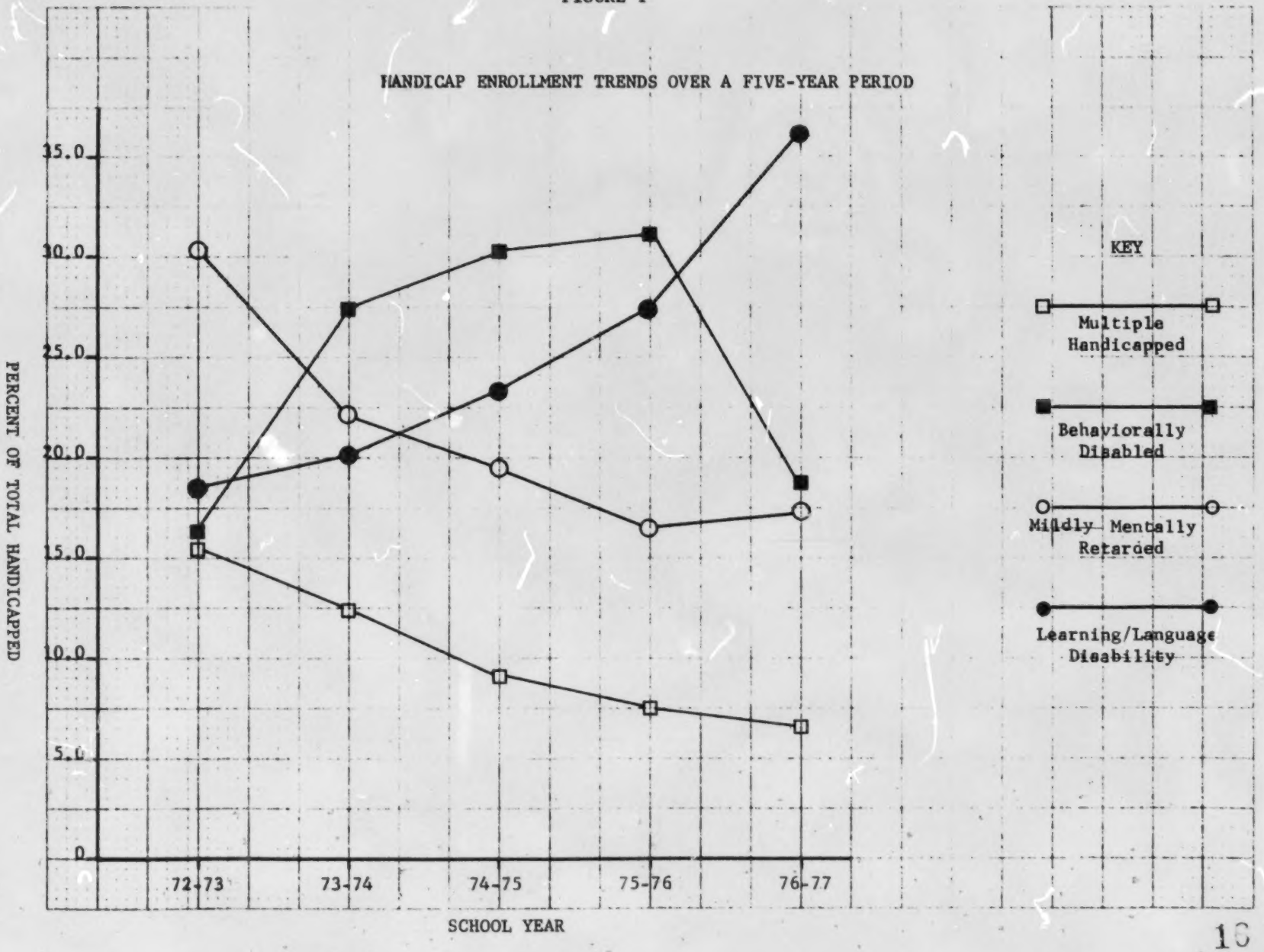
*Changed from "Emotionally Disturbed" designation in 1976.

**Severely and Profoundly Mentally Retarded and Moderately Mentally Retarded were combined under the designation "Trainable Mentally Retarded."

Note: Unenclosed numbers are raw frequencies; numbers in square brackets are percentages of Special Education enrollment; and numbers in parentheses are percentages of total District enrollment.

FIGURE 1

HANDICAP ENROLLMENT TRENDS OVER A FIVE-YEAR PERIOD



Behaviorally Disabled. The Behaviorally Disabled enrollment trend is quite different, almost doubling from 16.4% in 1972-73 to 31.6% in 1975-76, then declining sharply to 18.7% in 1976-77. The growth portion of this trend may well have been due to an increasing overuse of the Behaviorally Disabled category due to difficulty in interpreting eligibility criteria, since the decline in 1976-77 followed a State review of student files for documentation justifying Behaviorally Disabled placement.

Mentally Retarded. The Mildly Mentally Retarded trend is one of decreasing enrollment from 30.5% in 1972-73 to 16.4% in 1975-76 with a slight increase to 17.1% in 1976-77. The decrease may possibly have been due to increasing compliance with relatively clearcut State eligibility criteria for Mildly Mentally Retarded placement. Further decrease in future years might also be anticipated if measures are taken to reduce minority (especially Black) representation in the Mildly Mentally Retarded category. More will be said on this point in the next section in connection with the ethnic composition of the various handicap categories.

Learning/Language Disabled. The Learning/Language Disabled enrollment trend is particularly noteworthy. The 1976-77 percentage enrollment of 36.4% is double the 18.0% enrollment of 1972-73, with the greater rate of increase occurring after 1974-75. That this change in rate of increase corresponds in time with an increase in State funding of the Learning/Language Disabled category may be worth noting.

One last consideration concerning the District's handicap enrollment figures is how they compare with national figures. The most current available national statistics are for 1974 from the Bureau of Education for the Handicapped (BEH) and are published in the form of percent handicapped, by handicap category, in the total school population. For ease of comparison, the District's percent handicapped, by handicap category, in total District enrollment, 1976-77, is reproduced from Table 1 together with national figures in Table 2. Perhaps the most outstanding feature of Table 2 is the low total percent (4.4%) handicapped in the District as compared with the national total (8.8%). Thus, although the District's handicap enrollment has tended to increase over the last five years, it is still proportionately only one half the national handicapped enrollment of 1974.

TABLE 2

PERCENT HANDICAPPED IN TOTAL SCHOOL POPULATIONS

Source	Multiple Handi-capped	Visual*	Hearing	Ortho-pedic	Behav-iorally Disabled	Mental Retar-dation**	Learning Disabled	Total***
National (BEH, 1974)	.06	.20	.57	.50	2.00	3.00	2.50	8.85
District (1976-77)	.32	.02	.23	.07	.89	1.14	1.73	4.40

*Combines Blind and Partially Sighted
**Combines Severe, Moderate, and Mild
***Does not include Neurologically Impaired

Demographic Characteristics of Students Enrolled in Special Education Programs

The approach taken in generating a profile description of Special Education students was to find numbers of students within and across handicap categories in terms of selected demographic descriptors. The Student Master File* was the major source of information utilized, although census data were also used in investigating one descriptor, poverty level of residential neighborhood. The set of demographic descriptors selected for investigation were:

(1) sex,
(2) ethnic group,
(3) family structure (living with both parents versus other),
(4) poverty level of residential neighborhood,
(5) grade level (elementary versus secondary),
(6) age,
(7) school of attendance (neighborhood versus other),
(8) mode of transportation,
(9) geographic concentrations of students in selected handicap categories,
(10) number of siblings,
(11) referring school, and
(12) number and type of previous referrals.

Unfortunately data on the last three descriptors, (10) through (12), were not available. In addition, it was of interest to investigate certain psychometric descriptors: most current reading achievement measure, most current mathematics achievement measure, and other psychometric assessment data. These data were not available in a form suitable for large scale analysis.

Tables 3 through 12** and Figures 2 through 4 summarize the data that are available and will be discussed in turn.

*The Student Master File carries only those students listed as enrolled in a District school. Thus those students enrolled in private agencies for the handicapped are not included in the File, even though the District, through the Special Education Department, is fiscally responsible for their education.

**It should be pointed out that there are minor fluctuations in the frequencies given from table to table. Two factors account for this. First, a given student's record may not contain information on a given descriptor, in which case the student would not be counted in constructing the corresponding table. Second, different tables were constructed from the Student Master File at different times, over the period December, 1976 through February, 1977. Thus the tables also reflect minor changes in enrollment figures.

Sex Distribution. Table 3 gives the sex representation within and across handicap categories. The unenclosed numbers are raw frequencies and the numbers in parentheses are the corresponding percentages within handicap (row) categories. Thus, referring to the first row of Table 3, there were three males and three females in the Partially Sighted category, corresponding to a fifty-fifty percentage ratio of males to females within that category. Of particular interest in Table 3 is the total handicapped ratio of males to females, 70% to 30%, as compared with the total District ratio of 51.4% to 48.6%. This over-representation of males is particularly evident in the categories Neurologically Impaired (72.8% male to 27.2% female), Learning/Language Disabled (75.8% male to 24.2% female), and Behaviorally Disabled (81.1% male to 18.9% female). Why proportionately more males than females should be placed in these programs does not seem readily apparent. It might also be noted that the male/female ratios for Neurologically Impaired and Behaviorally Disabled are even more extreme at the elementary level (Grades 1-6): 75.2% male to 24.8% female for Neurologically Impaired and 85.9% male to 14.1% female for Behaviorally Disabled. At the secondary level (Grades 7-12), the ratios are 64.3% to 35.7% for Neurologically Impaired and 79.2% to 20.8% for Behaviorally Disabled. The Learning/Language Disabled ratio given above is fairly constant across grade level.

Ethnic Distribution. Table 4 gives the ethnic representation within and across handicap categories. Perhaps the most disturbing feature of Table 4 is the percentage of Black students in the Mildly Retarded category, 39.0%, as compared with the percentage of Black students in the District, 17.3%. Thus the representation of Black students in the Mildly Retarded category is more than double their representation in the District. The Office of Civil Rights has evidenced concern over situations such as this. In a memorandum addressed to State and Local Education Agencies, dated November 28, 1972, the Director of that office states:

> "During the past few years it has come to our attention that in many local education agencies a substantially higher percentage of minority children have been assigned to Special Education classes for the mentally retarded than the minority student population of the district would normally indicate."

The memorandum further reads:

> "Our reviews of many local education agencies lead us to believe that in many instances the racial and ethnic isolation of minority children in such classes which has occurred has in turn resulted from a failure by local educational agencies to utilize non-discriminatory evaluation and assignment standards and procedures with respect to minority children."

This reasoning has been further articulated in recent legislation such as Section 504 of the Rehabilitation Act of 1973 and Public Law 94-142.

In light of the above figures indicating an over-representation of Black

TABLE 3

SEX REPRESENTATION OF STUDENTS WITHIN AND ACROSS HANDICAP CATEGORIES

(December 3, 1976)

Handicap	Sex: Male	Sex: Female
Partially Sighted	3 (50.0)	3 (50.0)
Blind	2 (66.7)	1 (33.3)
Hearing Impaired	68 (47.9)	74 (52.1)
Orthopedically Impaired	20 (48.8)	21 (51.2)
Neurologically Impaired	115 (72.8)	43 (27.2)
Multiple Handicapped	103 (57.9)	75 (42.1)
Severely Retarded	21 (61.8)	13 (38.2)
Mildly Retarded	262 (59.8)	176 (40.2)
Moderately Retarded	101 (55.5)	81 (44.5)
Behaviorally Disabled	531 (81.1)	124 (18.9)
Learning/Language Disability	765 (75.8)	244 (24.2)
Total Handicapped	1,991 (70.0)	855 (30.0)
Total District	31,731 (51.4)	30,009 (48.6)

(Note: Unenclosed numbers are raw frequencies and numbers in parentheses are within-category percentages.)

TABLE 4

ETHNIC REPRESENTATION OF STUDENTS WITHIN AND ACROSS HANDICAP CATEGORIES

(December 3, 1976)

Handicap	Ethnic Group		
	White	Black	Other*
Partially Sighted	2 (33.3)	2 (33.3)	2 (33.3)
Blind	3 (100.0)	0 (0)	0 (0)
Hearing Impaired	107 (75.4)	17 (12.0)	18 (12.7)
Orthopedically Impaired	28 (70.0)	4 (10.0)	8 (20.0)
Neurologically Impaired	123 (79.9)	21 (13.5)	10 (6.5)
Multiple Handicapped	139 (78.5)	22 (12.4)	16 (9.0)
Severely Retarded	25 (73.5)	5 (14.7)	4 (11.8)
Mildly Retarded	204 (47.3)	168 (39.0)	59 (13.7)
Moderately Retarded	119 (65.7)	45 (24.9)	17 (9.4)
Behaviorally Disabled	449 (68.9)	154 (23.6)	49 (7.5)
Learning/Language Disabled	679 (67.4)	237 (23.5)	92 (9.1)
Total Handicapped	1,878 (66.4)	675 (23.9)	275 (9.7)
Total District	41,614 (67.7)	10,658 (17.3)	9,169 (14.9)

*Predominantly Asian

Note: Unenclosed numbers are raw frequencies and numbers in parentheses are within-category percentages.

students in the Mildly Mentally Retarded category, it appears that the District might anticipate a need to defend its assessment and placement procedures as being non-discriminatory to Black students. The same phenomenon should be considered for the Moderately Mentally Retarded, Behaviorally Disabled and Learning/Language Disabled categories in which the over-representation is less extreme, but nonetheless substantial.

That this phenomenon is not unique to Seattle was indicated in the above-cited memorandum. More detailed information with regard to this non-uniqueness can be found in Table 5, which compares Seattle's Mildly Mentally Retarded ethnic representation (reproduced from Table 4) with that for four other school districts throughout the country.* Inspection of Table 5 reveals a consistent over-representation of Black students in classes for the Mildly Mentally Retarded with an additional over-representation of Spanish-surnamed students in Denver, Colorado and Springfield, Massachusetts. Although the districts represented are by no means exhaustive, they do serve to illustrate that minority over-representation in Mildly Mentally Retarded programs is not peculiarly a Seattle phenomenon.

Non-English Language Background. Related to ethnicity is the incidence of non-English language backgrounds within and across handicap categories. These data are summarized in Table 6. As can be seen from Table 6, the incidence (4.0%) of non-English language backgrounds among all handicapped students is quite low as compared with the total District percentage of 8.6%. This is not surprising in view of the comparatively small representation of non-Black minority students among the handicapped, as was indicated in Table 5.

However, it would seem worthwhile to review assessment data on these students--especially in mildly handicapped categories--for assurance that the non-English background is not a primary but undetected reason underlying Special Education referral and placement.

Family Structure. Table 7 gives information relating to the family structure for students within and across handicap categories, i.e., the number of students living with both parents (intact) compared with the number coming from some other living arrangement (non-intact). As can be seen from Table 7, the total handicapped ratio of intact to non-intact family structure is 57% to 43%, as compared with the total District ratio of 67.4% to 32.6%. Those categories for which the intact/non-intact percentage ratio exceeds 57 to 43 are Orthopedically Impaired, Severely Retarded, Mildly Retarded and Behaviorally Disabled. The Orthopedically Impaired intact/non-intact percentage ratio is puzzling; there seems no apparent reason why these students should tend more than others to come from non-intact homes. However, the raw frequencies are quite small, so that the percentage ratios are not highly reliable. The Severely Retarded non-

*Statistics for the other school districts are based on Fall, 1973 enrollment figures and were drawn from the Children's Defense Fund, Washington Research Project, Inc., 1975.

TABLE 5

COMPARISON OF SEATTLE'S MILDLY MENTALLY RETARDED
ETHNIC REPRESENTATION
(DECEMBER, 1976)
WITH THAT IN FOUR OTHER SCHOOL DISTRICTS
(FALL, 1973)

State: District	Percentage of Total Student Enrollment			Percentage of Mildly Mentally Retarded Enrollment		
	White	Black	Other	White	Black	Other
Colorado: Denver	56.9	17.8	25.3*	27.8	33.4	38.8*
Alabama: Montgomery	52.9	46.9	0.2	19.1	80.7	0.2
South Carolina: Richland County (No. 1)	41.0	58.8	0.2	23.3	76.7	0.0
Georgia: Bibb County	48.8	51.1	0.0	28.3	71.7	0.0
Massachusetts: Springfield	64.9	25.4	9.8*	40.6	37.6	21.8*
Washington: Seattle	67.7	17.3	14.9	47.3	39.0	13.7

*Predominantly Spanish Surname

TABLE 6

INCIDENCE OF NON-ENGLISH LANGUAGE BACKGROUND
WITHIN AND ACROSS HANDICAP CATEGORIES
(April, 1977)

Handicap	Non-English Language Background
Partially Sighted	0 (0)
Blind	0 (0)
Hearing Impaired	10 (9.4)
Orthopedically Impaired	4 (11.4)
Neurologically Impaired	5 (3.2)
Multiple Handicapped	7 (4.2)
Severely Retarded	3 (8.8)
Mildly Retarded	19 (4.2)
Moderately Retarded	6 (3.2)
Behaviorally Disabled	26 (4.4)
Learning/Language Disabled	31 (3.0)
Total Handicapped	111 (4.0)
Total District	5,293 (8.6)

Note: Unenclosed numbers are raw frequencies and numbers in parentheses are within-category percentages.

TABLE 7

LIVING WITH (BOTH PARENTS VS. OTHER) STATUS FREQUENCIES WITHIN AND ACROSS HANDICAP CATEGORIES
(December 3, 1976)

Handicap	Living With Status: Both Parents	Other*
Partially Sighted	3 (50.0)	3 (50.0)
Blind	2 (66.7)	1 (33.3)
Hearing Impaired	92 (64.8)	50 (35.2)
Orthopedically Impaired	21 (52.5)	19 (47.5)
Neurologically Impaired	93 (58.9)	65 (41.1)
Multiple Handicapped	108 (61.4)	68 (38.6)
Severely Retarded	15 (44.1)	19 (55.9)
Mildly Retarded	229 (53.4)	200 (46.6)
Moderately Retarded	116 (65.5)	61 (34.5)
Behaviorally Disabled	311 (47.7)	341 (52.3)
Learning/Language Disabled	620 (61.4)	389 (38.6)
Total Handicapped	1,610 (57.0)	1,216 (43.0)
Total District	41,524 (67.4)	20,122 (32.6)

*Predominantly "Mother Only," except for Severely Retarded where many students reside in an agency.

Note: Unenclosed numbers are raw frequencies and numbers in parentheses are within-category percentages.

intact percentage is not too surprising as it reflects a large proportion of students who reside in agencies. However, the intact/non-intact percentage ratios for the Mildly Retarded and Behaviorally Disabled categories call for some further comment.

A plausible explanation for the inflated percentages of non-intact families in these categories (46.6% for Mildly Retarded and 52.3% for Behaviorally Disabled) lies in a possible cause-effect relationship between family structure and intellectual and socio-emotional growth. One implication of such a relationship is that, in cases of non-intact families, special efforts be made to involve the parent or guardian in the student's educational programming. An extension of this reasoning may be useful in partially explaining the over-representation of Black students in these categories, since nearly 60% of District Black students come from non-intact families versus 27% for District White students.

Family Income. Table 8 gives the estimated percent of students from families with incomes below poverty level (annual income less than $6,000) within and across handicap categories. It should be emphasized that these percentages are estimates.*

Inspection of Table 8 shows that the Moderately and Mildly Retarded estimated percentages below poverty level, 23.8% and 23.2%, respectively, compare most unfavorably with the Districtwide percent of 19.2%. The implication is that students enrolled in programs for the retarded tend to come from poorer homes where time and resources devoted to intellectual stimulation may be minimal. The Behaviorally Disabled estimated percent (21.4%) below poverty level is also somewhat higher than the Districtwide

*Because actual per student family income was not available, it was necessary to devise a method for estimating the percent below poverty level. The method used relied on 1970 census data in combination with 1974-75 school boundaries. The necessary information was drawn from Seattle Public Schools' School Status Profile Report 36V-3154, February 23, 1976. This report provided for each school the percentage of families within that school's boundaries earning under $6,000 annually. For each handicap category, the estimated percent of students from families with incomes below poverty level was calculated by multiplying the number of handicapped students residing within a given school's boundaries by that school's percentage of families earning under $6,000 and then summing these products over schools. As noted in Table 8, this was done for all handicap categories except those for which the number of students enrolled was too small to yield a reliable estimate. Moreover, only elementary schools were included in calculating the estimates. Since elementary school boundaries encompass smaller areas than do secondary school boundaries, it was felt that the families residing within would be more homogeneous with respect to income.

TABLE 8

ESTIMATED PERCENT OF STUDENTS FROM FAMILIES WITH ANNUAL INCOMES BELOW POVERTY LEVEL WITHIN AND ACROSS HANDICAP CATEGORIES
(February 17, 1977)

Handicap	Estimated Percent Below Poverty Level
Partially Sighted	*
Blind	*
Hearing Impaired	19.2
Orthopedically Impaired	*
Neurologically Impaired	18.2
Multiple Handicapped	19.1
Severely Retarded	*
Mildly Retarded	23.2
Moderately Retarded	23.8
Behaviorally Disabled	21.4
Learning/Language Disabled	19.2
Total Handicapped	20.3
Total District	19.2

*N is too small for a reliable estimate.

percent. This might be related to the already noted fact that Behaviorally Disabled students tend more than others to come from single parent (usually mother) homes where the family income might be expected to be lower.

Grade Level. Table 9 gives the grade level (elementary versus secondary) representation within and across handicap categories. Comparing the total handicapped elementary/secondary percentage ratio, 43.9% to 56.1%, with that for the total District, 48.5% to 51.5%, it may be seen that there is a slight over-representation of handicapped students at the secondary level. Inspection of the various handicap categories indicates that these over-representations at the secondary level tend to occur in the mentally and behaviorally handicapped categories as compared with the primarily physically handicapped categories, where over-representations occur at the elementary level. The most striking secondary over-representation is in the Severely Retarded category, with an elementary/secondary percentage ratio of 17.1% to 82.9%. A most sanguine interpretation of this finding is that it reflects the impact of recent medical advances as well as genetic counseling; that is, that there has been an actual decline in the birthrate of Severely Retarded children. Confirmation of this interpretation obviously depends on subsequent years' Severely Retarded enrollment. The Behaviorally Disabled category also shows a large secondary over-representation, with an elementary/secondary ratio of 28% to 72%. This may reflect either a tendency to defer placement of a student until a prior history of behavioral problems has been fully documented or, perhaps more likely, a lesser ability of regular classroom staffs to deal with behavior problems in older, more physically mature students.

Age. Table 10 gives the means and standard deviations of ages (in years) within and across handicap categories. Thus the information in Table 10 supplements that given in Table 9, but requires no additional interpretation. It is presented here without further comment for the reader's inspection.

School of Attendance. Table 11 gives school of attendance (home versus other)* within and across handicap categories. As can be seen from Table 11, the home/other percentage ratio for all handicapped students is 33.9% to 66.1%, compared with the total District ratio of 81.3% to 18.7%. Thus handicapped students are far more likely than others to attend schools outside of their residential area, although this is less true of students in the Behaviorally Disabled and Learning/Language Disabled categories where the home/other percentage ratios are 53.1% to 46.9% and 52.8% to 47.2%, respectively. This would seem a direct result of the fact that these two handicap programs are housed in many schools throughout the District, while other programs are located in only a limited number of schools. Moreover, a secondary student enrolled in either the Behaviorally Disabled or Learning/Language Disabled is more likely than an elementary student to be attending his/her home school. This may be seen by comparing

*Home school refers to a school within the student's residential area; Other school refers to a school outside the student's residential area.

TABLE 9
GRADE LEVEL (ELEMENTARY VS. SECONDARY) REPRESENTATION
WITHIN AND ACROSS HANDICAP CATEGORIES
(January 20, 1977)

Handicap	Grade Level: Elementary	Secondary
Partially Sighted	6 (100.0)	0 (0)
Blind	3 (100.0)	0 (0)
Hearing Impaired	86 (59.3)	59 (40.7)
Orthopedically Impaired	33 (75.0)	11 (25.0)
Neurologically Impaired	103 (65.2)	55 (34.8)
Multiple Handicapped	107 (55.4)	86 (44.6)
Severely Retarded	6 (17.1)	29 (82.9)
Mildly Retarded	167 (36.4)	292 (63.6)
Moderately Retarded	79 (41.4)	112 (58.6)
Behaviorally Disabled	165 (28.0)	424 (72.0)
Learning/Language Disabled	494 (48.2)	530 (51.8)
Total Handicapped	,249 (43.9)	1,598 (56.1)
Total District	29,714 (48.5)	31,571 (51.5)

Note: Unenclosed numbers are raw frequencies and numbers in parentheses are within-category percentages.

TABLE 10

MEANS AND STANDARD DEVIATIONS OF AGES (IN YEARS)
OF STUDENTS WITHIN AND ACROSS HANDICAP CATEGORIES
(January 20, 1977)

Handicap	Age Mean	Age Standard Deviation	N
Partially Sighted	7.2	0.75	6
Blind	8.0	0	3
Hearing Impaired	11.0	4.40	145
Orthopedically Impaired	9.4	4.58	43
Neurologically Impaired	10.8	3.31	158
Multiple Handicapped	11.2	4.79	192
Severely Retarded	14.7	3.50	35
Mildly Retarded	13.1	3.90	459
Moderately Retarded	12.8	4.83	188
Behaviorally Disabled	13.1	3.12	587
Learning/Language Disabled	12.3	2.87	1,024
Total Handicapped	12.4	3.55*	2,840
Total District	11.6	3.89	61,272

*Pooled over handicap categories

TABLE 11

SCHOOL OF ATTENDANCE (HOME VERSUS OTHER)
WITHIN AND ACROSS HANDICAP CATEGORIES
(February 2, 197[illegible])

Handicap	School of Attendance: Home	Other
Partically Sighted	0 (0)	6 (100.0)
Blind	0 (0)	3 (100.0)
Hearing Impaired	3 (2.1)	142 (97.9)
Orthopedically Impaired	1 (2.3)	43 (97.7)
Neurologically Impaired	25 (15.8)	133 (84.2)
Multiple Handicapped	0 (0)	193 (100.0)
Severely Retarded	0 (0)	35 (100.0)
Mildly Retarded	81 (17.6)	378 (82.4)
Moderately Retarded	2 (1.0)	189 (99.0)
Behaviorally Disabled	313 (53.1)	276 (46.9)
Learning/Language Disabled	541 (52.8)	483 (47.2)
Total Handicapped	966 (33.9)	1,881 (66.1)
Total District	49,850 (81.3)	11,435 (18.7)

Note: Unenclosed numbers are raw frequencies and numbers in parentheses are within-category percentages.

the home/other percentage ratios for the two grade levels. In the Behaviorally Disabled category, the elementary level home/other percentage ratio is 23% to 77%; the secondary level is 64.9% to 35.1%. In the Learning/Language category, the elementary level home/other percentage ratio is 31% to 69%; the secondary level ratio is 73.2% to 26.8%. These differential percentage ratios for the two grade levels are accounted for by the fact that almost all secondary level schools house a Behaviorally Disabled and/or Learning/Language Disabled program, whereas at the elementary level these programs are located by geographic region, so that a program at a given school enrolls students from several schools within that region.

Somewhat related to the question of whether a Special Education student attends his/her home school rather than another school is the transportation mode used in traveling to and from the particular school. Table 12 shows the various transportation modes within and across handicap categories. The various modes are probably self-explanatory except for "No District Responsibility," into which a large percentage, 25.4% and 28.0%, respectively, of Hearing Impaired and Learning/Language Disabled students are categorized. According to the Transportation Office, the "No District Responsibility" mode is reserved for those students who either come from outside the District or transfer from their home school for reasons other than District decision. In the case of the Hearing Impaired, the former seems to be true since 39 (27%) of these students reside outside the District. Since only one Learning/Language Disabled student resides outside the District, it appears that many of these students are located in schools selected by the parent rather than the District.

Geographic Distribution. The last demographic descriptor chosen for investigation was the geographic (by high school attendance area) concentration of students in selected handicap categories. The categories selected were those three containing the largest numbers of students: Mildly Retarded, Behaviorally Disabled, and Language/Learning Disabled. Figures 2 through 4 summarize the data. Since all three figures follow the same format, description of the format will be in terms of Figure 2. An unenclosed number is the raw frequency of Mildly Retarded students residing within a given geographic region; a number in parentheses is the corresponding percentage of Mildly Retarded students within that region; and a number in square brackets is the percentage of the total District's students residing within the given region. Thus, for example, 32 Mildly Retarded students live within the boundaries of Ingraham High School, which corresponds to 7.1% of all Mildly Retarded students, while 9.1% of the total District's students live within these same boundaries. The shaded areas represent those regions in which the Mildly Retarded percentage exceeds the total District percentage, indicating an over-concentration of Mildly Retarded students as compared with total District representation. Thus Figure 2 indicates an over-concentration of Mildly Retarded students primarily in the Central and South portions of the District. A purely incidental, but noteworthy, finding relating to the geographic concentration pattern of the Mildly Mentally Retarded is its similarity to

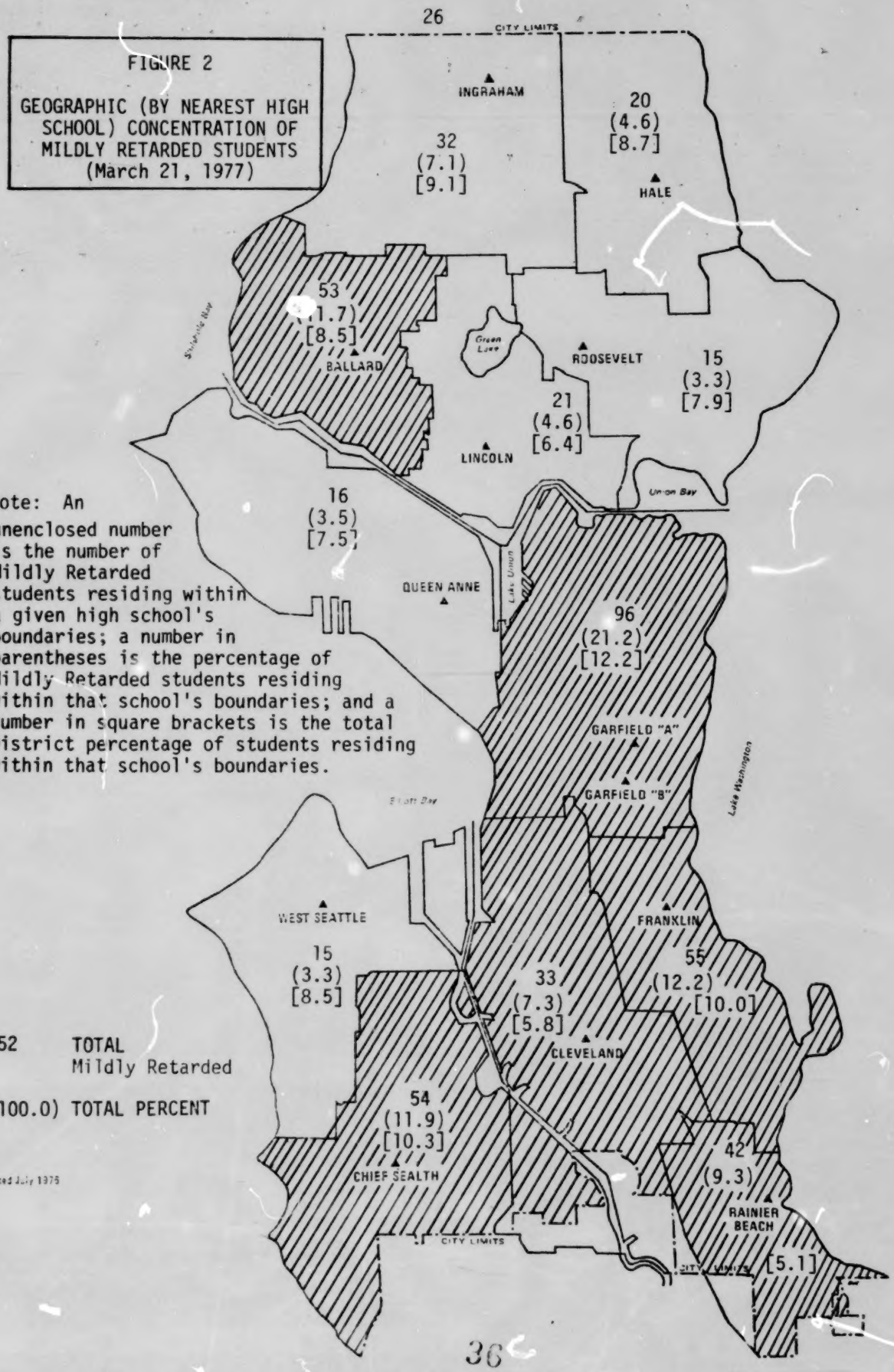
MODES OF TRANSPORTATION WITHIN AND ACROSS HANDICAP CATEGORIES
(December, 1976)

Mode of Transportation	Partially Sighted	Blind	Hearing Impaired	Ortho-pedically Impaired	Neuro-logically Impaired	Multiple Handi-capped	Severely Retarded	Mildly Retarded	Moderately Retarded	Behav-iorally Disabled	Learning/ Language Disabled	Total Handi-capped	Total District
Public Transportation, Token	0 (0)	0 (0)	0 (0)	0 (0)	11 (6.9)	4 (2.2)	0 (0)	81 (18.5)	20 (10.8)	6 (0.9)	19 (1.9)	141 (4.9)	181 (0.3)
Special Transportation, Special Education	0 (0)	0 (0)	3 (2.1)	9 (21.4)	0 (0)	32 (18.0)	2 (5.9)	16 (3.7)	3 (1.6)	10 (1.5)	2 (0.2)	77 (2.7)	130 (0.2)
Regular School Bus	0 (0)	0 (0)	2 (1.4)	3 (7.1)	19 (11.9)	11 (6.2)	0 (0)	37 (8.4)	2 (1.1)	105 (16.0)	107 (10.6)	286 (10.0)	1,228 (2.0)
Public Transportation, Passes	0 (0)	0 (0)	18 (12.7)	0 (0)	9 (5.7)	1 (0.6)	0 (0)	38 (8.7)	0 (0)	49 (7.5)	46 (4.6)	161 (5.6)	209 (0.3)
No District Responsibility	0 (0)	0 (0)	36 (25.4)	5 (11.9)	16 (10.1)	20 (11.2)	1 (2.9)	57 (13.0)	6 (3.2)	10 (1.5)	283 (28.0)	434 (15.2)	677 (1.1)
House to School Pick Up	6 (100.0)	3 (100.0)	70 (49.3)	10 (23.8)	56 (35.2)	92 (51.7)	30 (88.2)	152 (34.7)	137 (73.7)	4 (0.6)	7 (0.7)	567 (19.9)	595 (1.0)
Corner Pick Up	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.2)	182 (18.0)	183 (6.4)	189 (0.3)
Student Within 2-Mile Limit	0 (0)	0 (0)	13 (9.2)	15 (35.7)	48 (30.2)	18 (10.1)	1 (2.9)	57 (13.0)	18 (9.7)	472 (71.8)	363 (36.0)	1,005 (35.2)	58,553 (94.8)

Note: Unenclosed numbers are raw frequencies and numbers in parentheses are within-handicap category percentages.

FIGURE 2

GEOGRAPHIC (BY NEAREST HIGH SCHOOL) CONCENTRATION OF MILDLY RETARDED STUDENTS (March 21, 1977)



Note: An unenclosed number is the number of Mildly Retarded students residing within a given high school's boundaries; a number in parentheses is the percentage of Mildly Retarded students residing within that school's boundaries; and a number in square brackets is the total District percentage of students residing within that school's boundaries.

452 TOTAL Mildly Retarded

(100.0) TOTAL PERCENT

Revised July 1976

the pattern of "disadvantagedness"* indices for the serving high schools. This similarity may be seen in Table 13, which compares each high school's disadvantagedness index with the difference between the percent Mildly Retarded and the percent total District residing within that high school's boundaries. The correlation coefficient, a measure of the relationship between the two measures, is highly significant--.82--and is thus indicative of a strong relationship between disadvantagedness and concentration of Mildly Mentally Retarded. This finding is consistent with other results reported here regarding over-representations of low-income and non-intact families in the Mildly Retarded category.

Figure 3, depicting geographic concentrations of Behaviorally Disabled students, shows no such clear pattern as could be seen in Figure 2 for the Mildly Retarded. In fact, the shaded regions appear to be randomly distributed over the District.

Figure 4, showing geographic concentrations of Learning/Language Disabled students, on the other hand, indicates an over-concentration of Learning/Language Disabled students in the Southwest portion of the District, particularly in the Sealth Consortium. Why this should be the case does not seem readily apparent.

*The Disadvantagedness Index assigned a school is essentially a weighted sum of ten factors: percent non-White enrollment, parent education, Free Lunch participants, non-English speaking students, student mobility, academic achievement, poverty, absenteeism, single parent families, and Special Education enrollment. The weights attached to the components were determined through Area Administrators' rankings. This weighted sum is then standardized so that an average school has an index value of zero. A school with a higher than average disadvantagedness will have a positive index value and a school with lower than average disadvantagedness will have a negative index value. The larger a school's index value, the further that school is above or below average disadvantagedness.

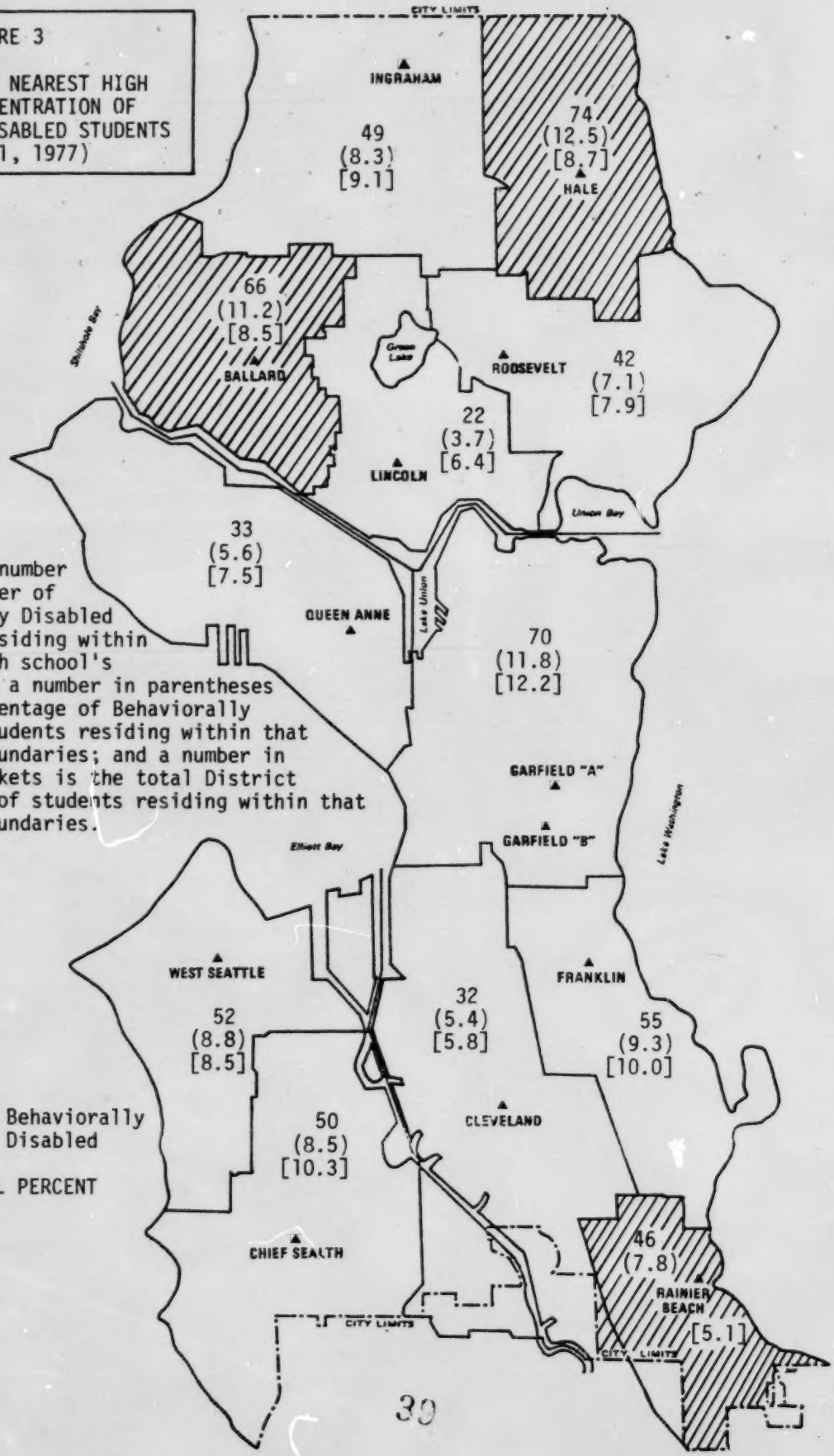
TABLE 13

COMPARISON OF HIGH SCHOOL DISADVANTAGEDNESS INDICES WITH A GEOGRAPHIC CONCENTRATION OF MILDLY MENTALLY RETARDED STUDENTS (March 21, 1977)

School	Disadvantagedness Index	Percent Mildly Retarded Minus Percent Total District
Garfield	2.05	9.0
Franklin	.97	2.2
Lincoln	.91	-1.8
Cleveland	.64	1.5
Rainier Beach	.23	4.2
Ballard	.00	3.2
Sealth	- .18	1.6
Queen Anne	- .57	-4.0
West Seattle	- .89	-5.2
Nathan Hale	- .92	-4.1
Ingraham	-1.03	-2.0
Roosevelt	-1.22	-4.6

FIGURE 3

GEOGRAPHIC (BY NEAREST HIGH SCHOOL) CONCENTRATION OF BEHAVIORALLY DISABLED STUDENTS (March 21, 1977)



Note: An unenclosed number is the number of Behaviorally Disabled students residing within a given high school's boundaries; a number in parentheses is the percentage of Behaviorally Disabled students residing within that school's boundaries; and a number in square brackets is the total District percentage of students residing within that school's boundaries.

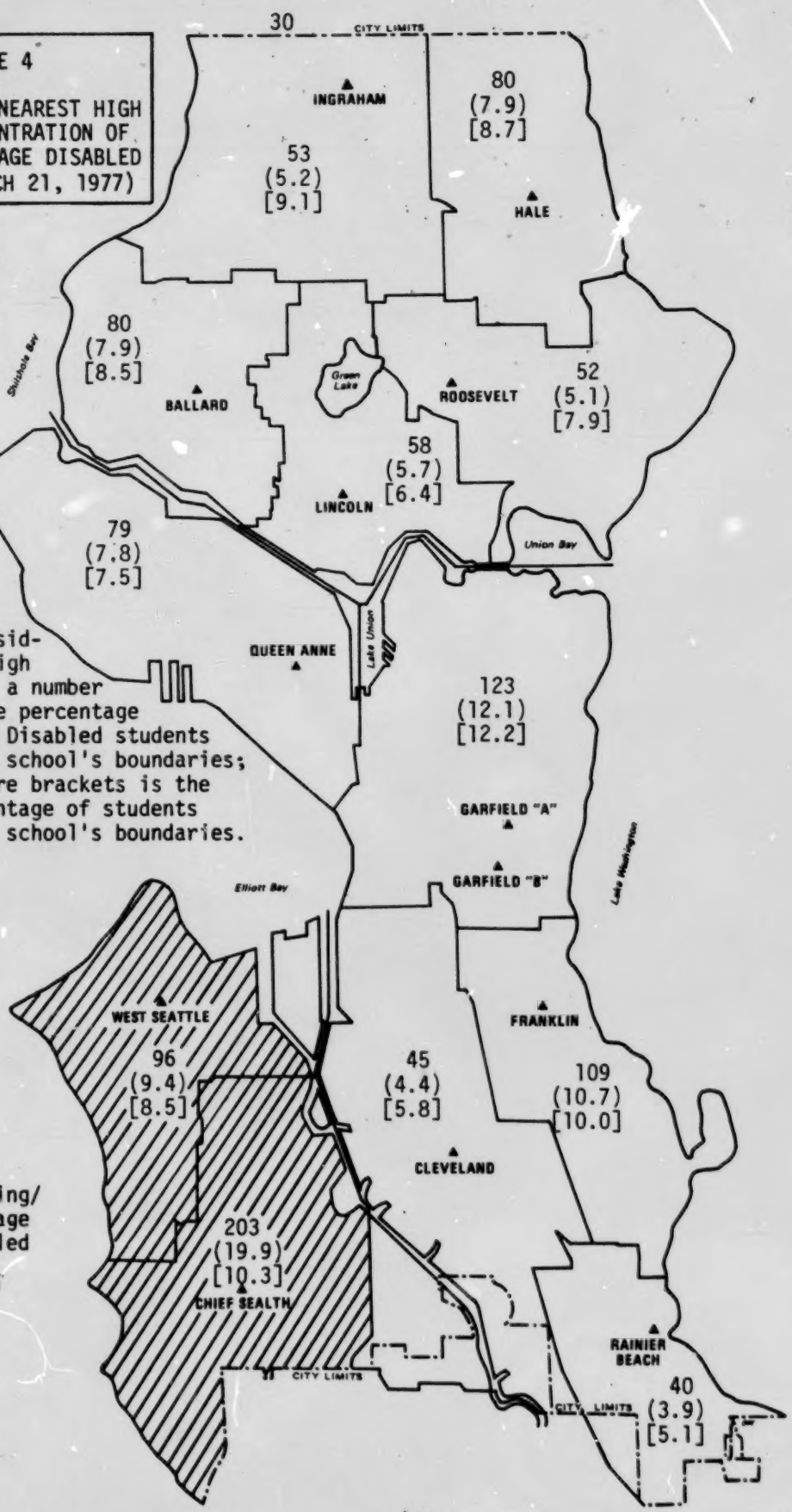
591 TOTAL Behaviorally Disabled

(100.0) TOTAL PERCENT

Revised 29 April 1974

FIGURE 4

GEOGRAPHIC (BY NEAREST HIGH SCHOOL) CONCENTRATION OF LEARNING/LANGUAGE DISABLED STUDENTS (MARCH 21, 1977)



Note: An unenclosed number is the number of Learning/Language Disabled students residing within a given high school's boundaries; a number in parentheses is the percentage of Learning/Language Disabled students residing within that school's boundaries; and a number in square brackets is the total District percentage of students residing within that school's boundaries.

1018 TOTAL Learning/Language Disabled

(100.0) TOTAL PERCENT

Revised July 1976

Current Special Education Assessment, Placement and Intervention Practices

This portion of the report addresses itself to many questions. Unfortunately, a large number of these questions could not be answered with "hard" data, since these data were not on record at the time of this writing. To address such questions, an interview was conducted in February, 1977 with the Supervisor of Student Services and her Psychologist Assistant, who, it was felt, were most knowledgeable as to current practices in the areas of concern. These questions, and the answers given, are listed below:

1. Of all students referred for possible Special Education intervention, what percentage receive formal assessment?

   . All who are made a "focus of concern."* However, there is a greater reluctance in the primary grades to make a child a focus of concern; the preference is to first do a preliminary informal assessment. In the secondary grades, where a student has a more extensive documented history and the services of a school counselor, there is more readiness to make the student a focus of concern.

2. Of all students referred for possible Special Education intervention, what percentage are placed in Special Education classes?

   Approximately one-third of the total number of referrals.

3. Of all students eligible for Special Education placement, what percentage are placed on waiting lists for placement?

   There is no formal waiting list currently maintained.

4. Of all students referred for possible Special Education intervention, what percentage were previously placed in Special Education classes?

   Many,** particularly at the secondary level.

5. Of all students referred for possible Special Education intervention, what percentage had parents who refused formal assessment?

   Very few,** because of ongoing communication with parents concerning problem history and results of preliminary informal assessment.

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*A student becomes a focus of concern upon filing of a Focus of Concern form. This form includes the name of person(s) referring the student, the reason, remedial actions attempted, and results of remedial actions.

**A realistic percentage estimate could not be given.

6. Of all students eligible for Special Education placement, what percentage had parents who refused placement?

   Approximately 10%.

7. Of all students who receive Special Education placement, what percentage had parents who terminated placement?

   A small minority.*

8. Of all students who receive Special Education placement, what percentage are returned to regular class placement after a given period of time?

   Not known.

9. Of all students who receive Special Education placement and/or intervention, what percentage have a six-week evaluation?

   None, because of staff shortage/overload. A more realistic goal is within six months.

10. Of all students who receive Special Education placement and/or intervention, what percentage have individual goals written for them?

    Expected to be one hundred percent as of April 1, 1977.

11. Of all students who receive Special Education placement and/or intervention, what percentage have individual objectives and strategies written for them?

    Expected to be one hundred percent as of April 1, 1977; however, this is frequently done solely by the classroom teacher.

12. Of all students who receive Special Education placement and/or intervention, what percentage have a given number of parent conferences and/or follow-up conferences concerning them?

    The classroom teacher contacts the parent to arrange a signing off of goals at least at every year's end.*

In the future, answers to questions such as 1-12 above will hopefully be available on the computer, since a more extensive computerized record-keeping system for Special Education is now in the planning stages. This projected system will provide the additional benefit of permitting percentage breakdowns by handicap, sex, age, and ethnic group. It had been planned to provide such breakdowns in this report, but this obviously was not possible.

*A realistic percentage estimate could not be given.

The next questions, 13 through 15, were answered through use of the Student Master File. These questions are all addressed to a description of students who are placed in Special Education resource rooms, self-contained classrooms, or who receive contractual services. Since, for a variety of reasons, many resource rooms were closed prior to the Fall, 1976 opening of District schools, caution is advised in interpreting the findings as anything more than suggestive.

13. Of all students who receive Special Education placement, what percentage of each sex are placed in resource rooms, self-contained classes, or receive contractual services?*

    Question 13 is addressed in Table 14. As may be noted, not all handicap categories are included. Those excluded are those for which 100% of the enrollment is placed in self-contained classrooms. Indeed, as may be seen from the total handicapped entries, a very large majority (89%) of handicapped students are placed in self-contained classrooms. That this figure is so large may have implications for future compliance with recent Federal legislation (Public Law 94-142), which requires that handicapped students be integrated or mainstreamed into regular education classrooms wherever possible. Depending on how this legislation is interpreted during implementation, a massive effort may be necessary to ensure each compliance. The picture is not quite so bleak for the Learning/Language Disabled category. Of these students, 22.5% are placed in resource rooms, which indicates that proportionately more of these students are spending a portion of their school day in regular education classrooms. As for a male/female differential placement, the Behaviorally Disabled category appears to have the largest male/female difference in resource room placement (7.4% of the males compared with 13.2% of the females). It may be that because the Behaviorally Disabled females are felt to be less disruptive in a regular education classroom, more of them are permitted this option.

14. Of all students who receive Special Education placement, what percentage of each ethnic group are placed in resource rooms, self-contained classes, or receive contractual services?

    Question 14 is addressed in Table 15. As can be seen in this table, the Behaviorally Disabled category has the largest ethnic group difference in resource room placement (6.1% of the White, 12.2% of the Black, and 17.8% of the Other Behaviorally Disabled students). That these ethnic group percentage differences in resource room placement are a function of differences in tendency

*Those students reported here as receiving contractual services, although listed in the Student Master File as enrolled in District schools, are actually receiving services from other sources (e.g., University of Washington Experimental Education Unit, Northwest Center for the Retarded, Spastic Pre-School).

TABLE 14

PERCENTAGE OF EACH SEX PLACED IN RESOURCE ROOMS, SELF-CONTAINED CLASSROOMS OR RECEIVING CONTRACTUAL SERVICES
(February 17, 1977)

Handicap	Type of Service	Sex: Male	Sex: Female	Total
Neurologically Impaired	Resource Room	0 (0)	0 (0)	0 (0)
	Self-Contained	112 (99.1)	45 (100.0)	157 (99.4)
	Contract	1 (0.9)	0 (0)	1 (0.6)
Multiple Handicapped	Resource Room	0 (0)	0 (0)	0 (0)
	Self-Contained	102 (87.9)	70 (92.1)	172 (89.6)
	Contract	14 (12.1)	6 (7.9)	20 (10.4)
Severely Retarded	Resource Room	0 (0)	0 (0)	0 (0)
	Self-Contained	22 (100.0)	12 (92.3)	34 (97.1)
	Contract	0 (0)	1 (7.7)	1 (2.9)
Moderately Retarded	Resource Room	0 (0)	0 (0)	0 (0)
	Self-Contained	100 (96.2)	81 (96.4)	181 (96.3)
	Contract	4 (3.8)	3 (3.6)	7 (3.7)
Behaviorally Disabled	Resource Room	35 (7.4)	15 (13.2)	50 (8.5)
	Self-Contained	437 (92.4)	99 (86.8)	536 (91.3)
	Contract	1 (0.2)	0 (0)	1 (0.2)
Learning/Language Disabled	Resource Room	175 (22.4)	55 (22.7)	230 (22.5)
	Self-Contained	605 (77.4)	187 (77.3)	792 (77.3)
	Contract	2 (0.3)	0 (0)	2 (0.2)
Total Handicapped	Resource Room	210 (10.6)	70 (8.2)	280 (9.9)
	Self-Contained*	1,750 (88.3)	778 (90.7)	2,528 (89.0)
	Contract	22 (1.1)	10 (1.2)	32 (1.1)

*Includes all handicap categories, even those not listed in this table.
Note: Unenclosed numbers are raw frequencies and numbers in parentheses are within-type of service, within-category percentages.

TABLE 15

PERCENTAGE OF EACH ETHNIC GROUP PLACED IN RESOURCE ROOMS, SELF-CONTAINED CLASSROOMS OR RECEIVING CONTRACTUAL SERVICES (February 17, 1977)

Handicap	Type of Service	Ethnic Group: White	Black	Other*
Multiple Handicapped	Resource Room	0 (0)	0 (0)	0 (0)
	Self-Contained	129 (95.6)	27 (100.0)	16 (94.1)
	Contract	6 (4.4)	0 (0)	1 (5.9)
Severely Retarded	Resource Room	0 (0)	0 (0)	0 (0)
	Self-Contained	23 (100.0)	4 (100.0)	7 (87.5)
	Contract	0 (0)	0 (0)	1 (12.5)
Moderately Retarded	Resource Room	0 (0)	0 (0)	0 (0)
	Self-Contained	113 (93.4)	44 (100.0)	24 (96.0)
	Contract	8 (6.6)	0 (0)	1 (4.0)
Behaviorally Disabled	Resource Room	24 (6.1)	18 (12.2)	8 (17.8)
	Self-Contained	369 (93.4)	129 (87.8)	37 (82.2)
	Contract	2 (0.5)	0 (0)	0 (0)
Learning/Language Disabled	Resource Room	156 (22.7)	55 (22.7)	19 (19.8)
	Self-Contained	530 (77.3)	186 (76.9)	76 (79.2)
	Contract	0 (0)	1 (0.4)	1 (1.0)
Total Handicapped	Resource Room	180 (9.7)	73 (10.7)	27 (9.3)
	Self-Contained**	1,662 (89.5)	606 (89.1)	260 (89.3)
	Contract	16 (0.9)	1 (0.2)	4 (1.4)

*Predominantly Asian

**Includes all handicap categories, even those not listed in this table.

Note: Unenclosed numbers are raw frequencies and numbers in parentheses are within-type of service, within-category percentages.

to exhibit aggressive or disruptive behavior, as was suggested for the male/female percentage differences, is an open question; it would seem that teachers of the Behaviorally Disabled would be in the best position to answer this question or offer an alternative explanation. None of the other handicap categories exhibit particularly notable ethnic group placement differences.

15. Of all students who receive Special Education placement, what are the average ages of those placed in resource rooms, self-contained classes, or who receive contractual services?

    Question 15 is addressed in Table 16. In order to interpret Table 16, it should be pointed out that there are no resource rooms in the elementary schools, while only two secondary (one junior high and one middle) schools have resource rooms for the Behaviorally Disabled and eleven secondary (six senior and five junior high) schools have resource rooms for the Learning/Language Disabled. Thus the resource/self-contained mean age difference for students in the Behaviorally Disabled category is very slight and, as might be expected, the standard deviation (a measure of variation about the mean) of ages for Behaviorally Disabled resource room students is quite small. The large resource/self-contained mean age difference, 15.1 compared to 11.4, in the Learning/Language Disabled category appears to be due to the greater availability of resource rooms to students at the secondary level. The relatively low mean age (8.7) of students receiving contractual services appears due to a large number of pre-schoolers receiving such services.

The next two questions, 16 and 17, were answered through use of reports submitted to the State Superintendent of Public Instruction.

16. Of all students who receive Special Education placement or related services, what percentage receive Special Education-related services* while in regular classes?

*Special Education related services are those services, such as speech therapy, that are provided to students who are not actually enrolled in Special Education classes.

TABLE 16

MEANS AND STANDARD DEVIATIONS OF AGES (IN YEARS) OF STUDENTS PLACED IN RESOURCE ROOMS, SELF-CONTAINED CLASSROOMS OR RECEIVING CONTRACTUAL SERVICES
(February 17, 1977)

		Age		
Handicap	Type of Service	Mean	Standard Deviation	N
Neurologically Impaired	Resource Room	----	----	0
	Self-Contained	10.9	3.3	157
	Contract	6.0	----	1
Multiple Handicapped	Resource Room	----	----	0
	Self-Contained	11.6	4.6	172
	Contract	7.5	5.3	21
Severely Retarded	Resource Room	----	----	0
	Self-Contained	14.5	3.4	34
	Contract	20.0	----	1
Moderately Retarded	Resource Room	----	----	0
	Self-Contained	12.8	4.7	181
	Contract	10.2	7.6	10
Behaviorally Disabled	Resource Room	13.4	1.5	50
	Self-Contained	13.1	3.2	537
	Contract	9.0	4.2	2
Learning/Language Disabled	Resource Room	15.1	2.4	230
	Self-Contained	11.4	2.5	792
	Contract	8.5	2.1	2
Total Handicapped	Resource Room	14.8	2.2	280
	Self-Contained*	11.9	3.2	2571
	Contract	8.7	5.7	37

*Includes all handicap categories, even those not listed in this table.

Question 16 is addressed in Table 17.* Since Speech Impaired and Other Health Impaired are not Special Education categories, all (100%) of these students receive Special Education-related service while in regular classes. Also, a good portion (86.2%) of the Visually Impaired students are also receiving related services. In the latter case, it seems reasonable to assume that the related services are being delivered to students with less severe sight problems.

17. Of all students who receive Special Education placement, what percentage are placed in agencies or institutions?

    Figures reported in February, 1977 indicate that 4 or 2.2% of Multiple Handicapped students and 72 or 12.9% of Behaviorally Disabled students are in agencies.** It would seem reasonable to assume that the latter students' severity of disability is related to their placement in an agency. No other handicapped students are reported as being served by an agency or institution.

Although it was considered desirable, no sex, ethnic, nor age breakdowns were available in answering questions 16 and 17.

18. Of all students who receive Special Education placement, what percentage are suspended, expelled, or drop out of school?

    Question 18, the last posed in this portion of the report, was addressed to the Placement Office. Unfortunately, the Placement Office records (kept manually in the form of a daily log) do not always indicate whether a student who is suspended, expelled, or drops out of school was enrolled in a Special Education class. Thus question 18 cannot be answered at this time.

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*With regard to Table 17, it should be pointed out that students receiving related services have not been included in previous tables, as they are not recorded in the Student Master File as being in Special Education classes. Moreover, the handicap categorization in Table 17 differs from that given in preceding tables. The following differences should be noted: Visually Impaired includes both partially sighted and blind students; neurologically impaired students are grouped with Orthopedically Handicapped; Mentally Retarded includes mildly, moderately, and severely retarded; the Multiple Handicapped category is omitted; Speech Impaired (articulation, rhythm, voice, etc.) is added; and Other Health Impaired (heart, asthma, metabolic, etc.) is also added.

**The agencies serving the Behaviorally Disabled students are Ryther Child Center, Recreation Vocation Education Center and Seattle Children's Home.

TABLE 17

PERCENTAGE OF STUDENTS RECEIVING SPECIAL EDUCATION RELATED SERVICES WHILE IN REGULAR CLASSES WITHIN AND ACROSS HANDICAP CATEGORIES
(October, 1976)

Handicap	Enrolled in Special Education	Receiving Related Services	Total	Percent Receiving Related Services
Visually Impaired	9	56	65	86.2
Hearing Impaired	139	32	171	18.7
Orthopedically Handicapped	212	30	242	12.4
Mentally Retarded	689	0	689	0.0
Behaviorally Disabled	677	4	681	0.5
Learning/Language Disabled	1,079	2	1,081	0.2
Speech Impaired	0	1,261	1,261	100.0
Other Health Impaired	0	54	54	100.0
Total Handicapped	2,805	1,439	4,244	33.9

Description of Special Education Teaching Staff

Three classes of descriptors were selected in generating a profile of the Special Education teaching staff within and across handicap categories: (1) demographic characteristics (sex, ethnic group, age, etc.); (2) experience (years of total teaching experience, type of certification); and (3) educational background (highest degree held). The source of information was an April, 1977 listing of certificated Special Education staff generated by the Payroll Records Section.*

Tables 18 through 23 summarize the information and will be discussed in turn.**

Sex Distribution. Table 18 gives the sex representation of Special Education teaching staff within and across handicap categories. Comparing the male/female percentage ratio of 31.3% to 68.7% across handicap categories with the District ratio of 39.8% to 60.2%, it appears that there is a moderate under-representation of male teachers in Special Education. Within handicap categories, this under-representation is particularly evident for teachers of the Learning/Language Disabled, where the male/female percentage ratio is 17.5% to 82.5%. Quite in contrast to this finding is the sex representation in the Behaviorally Disabled category--a male/female teacher percentage ratio of 47.4% to 52.6%. That the latter ratio may reflect a tendency to place male teachers with more physically mature disturbed students seems plausible in view of the following grade level breakdown. At the senior high school level, the male/female teacher percentage ratio is 61.1% to 38.9%; at the junior high/middle school level, the ratio is 50% to 50%; and at the elementary level, the ratio is 31.6% to

*Information was extracted only for those Special Education teachers serving in District schools in keeping with the student information presented earlier.

**It should be noted that the handicap categories differ somewhat from those listed in preceding (student) tables. This is because the Payroll Records Section uses a somewhat different handicap coding system from that utilized previously in this report. Thus in Tables 18 through 23, Visually Impaired includes teachers of both Partially Sighted and Blind students; teachers of the Multiple Handicapped are coded according to their handicap specialty, so that this category is omitted; Mentally Retarded, Mixed is comprised of Green Lake and Pacific teachers who teach classes of mentally retarded students of varying degrees of retardation. All teachers of Severely Mentally Retarded are contained in this category. It might also be noted in Tables 20 through 23, no total District teacher data are included. Unfortunately, from the standpoint of making comparisons, these data could not be obtained. The total District teacher figures in Tables 18 and 19 were obtained from the District's 1976-77 Racial Distribution report (figures as of January 15, 1977).

TABLE 18

SEX REPRESENTATION OF SPECIAL EDUCATION TEACHING STAFF WITHIN AND ACROSS HANDICAP CATEGORIES
(May 20, 1977)

Handicap	Sex: Male	Sex: Female
Visually Impaired	1 (25.0)	3 (75.0)
Hearing Impaired	5 (21.7)	18 (78.3)
Orthopedically Impaired	3 (23.1)	10 (76.9)
Neurologically Impaired	8 (38.1)	13 (61.9)
Mentally Retarded, Mixed	15 (28.8)	36 (69.2)
Mildly Retarded	13 (39.4)	20 (60.6)
Moderately Retarded	0 (0)	3 (100.0)
Behaviorally Disabled	27 (47.4)	30 (52.6)
Learning/Language Disabled	10 (17.5)	47 (82.5)
Total Special Education Teachers	82 (31.3)	180 (68.7)
Total District Teachers	1,088 (39.8)	1,649 (60.2)

Note: Unenclosed numbers are raw frequencies and numbers in parentheses are within-category percentages.

68.4%. Thus the sex representation of teachers of the Behaviorally Disabled seems very much a student age-related phenomenon.

Ethnic Distribution. Table 19 gives the ethnic representation of Special Education teaching staff within and across handicap categories. Comparing the ethnic representation of Special Education teachers across handicap categories (88.2% White, 7.2% Black, 4.6% Other) with that for all District teachers (82.5% White, 8.5% Black, 9.1% Other), there appears to be an over-representation of White teachers with a corresponding under-representation of Black and other minority teachers in Special Education. This trend is particularly evident for teachers of the Mixed Mentally Retarded (Green Lake and Pacific) (92.2% White, 5.9% Black, 2.0% Other), and Learning/Language Disabled (91.2% White, 7.0% Black, 1.8% Other). The ethnic representation of teachers of the Mildly Retarded and Behaviorally Disabled is somewhat different; there are more Black teachers (12.1% and 10.3% respectively) than would be expected from the total District percentage, 8.5%. It is also of some interest to compare the ethnic representation of Special Education teachers with that of their students (Table 4). For all handicapped students the percentages are 66.4% White, 23.9% Black, and 9.7% Other. Obviously, the percentages for all Special Education teachers do not correspond in magnitude to these values; however, neither do the total District teacher ethnic percentages correspond to those for the total District students. Thus if this lack of correspondence is of concern, it is of concern for the entire District and not just for Special Education.

Staff Age. Table 20 gives the means and standard deviations of ages (in years) of Special Education teaching staff within and across handicap categories. Perhaps the most noteworthy deviation from the overall average Special Education teacher age of 39.7 years is the lower average age, 37, of teachers of the Behaviorally Disabled. A grade level breakdown of average age of teachers of the Behaviorally Disabled is revealing. For both senior high and elementary teachers the average age is 38.3, but for junior high/middle school teachers the average age is 34.9. Clearly the lower overall average age of teachers of the Behaviorally Disabled is primarily due to the comparative youth of teachers at the junior high/middle school level. It might be noted that for all three demographic variables (sex, ethnic group, age) teachers of the Behaviorally Disabled differ in some way from Special Education teachers in general.

Teaching Experience. Tables 21 and 22 contain data pertaining to the teaching experience of Special Education teachers. Table 21 gives the means and standard deviations of years' teaching experience (in Washington State) of Special Education teaching staff within and across handicap categories. It should be stressed that Table 21 reflects only in-State experience so that caution should be used in interpreting the means. Even so, there does appear to be a relationship between age and teaching experience. The handicap categories noted by a "plus" sign next to the mean are those for which the average number of years' experience is greater than the overall average (8.3). These categories are the same as those for which the average age is greater than the overall average age, with one exception. The exception is in the Mixed Mentally Retarded category. There the number of years' experience, 9.4, is greater than the overall

TABLE 19

ETHNIC REPRESENTATION OF SPECIAL EDUCATION TEACHING STAFF
WITHIN AND ACROSS HANDICAP CATEGORIES
(May 20, 1977)

Handicap	Ethnic Group		
	White	Black	Other*
Visually Impaired	4 (100.0)	0 (0)	0 (0)
Hearing Impaired	20 (87.0)	0 (0)	3 (13.0)
Orthopedically Impaired	12 (92.3)	0 (0)	1 (7.7)
Neurologically Impaired	18 (85.7)	2 (9.5)	1 (4.8)
Mentally Retarded, Mixed	47 (92.2)	3 (5.9)	1 (2.0)
Mildly Retarded	27 (81.8)	4 (12.1)	2 (6.1)
Moderately Retarded	3 (100.0)	0 (0)	0 (0)
Behaviorally Disabled	49 (84.5)	6 (10.3)	3 (5.2)
Learning/Language Disabled	52 (91.2)	4 (7.0)	1 (1.8)
Total Special Education Teachers	232 (88.2)	19 (7.2)	12 (4.6)
Total District Teachers	2,257 (82.5)	232 (8.5)	248 (9.1)

*Predominantly Asian

Note: Unenclosed numbers are raw frequencies and numbers in parentheses are within-category percentages.

TABLE 20

MEANS AND STANDARD DEVIATIONS OF AGES (IN YEARS) OF SPECIAL EDUCATION TEACHING STAFF WITHIN AND ACROSS HANDICAP CATEGORIES (May 20, 1977)

Age

Handicap	Mean	Standard Deviation	N
Visually Impaired	51.2 (+)	9.32	4
Hearing Impaired	40.9 (+)	11.57	23
Orthopedically Impaired	39.2	7.00	13
Neurologically Impaired	39.2	11.93	21
Mentally Retarded, Mixed	39.0	11.12	51
Mildly Retarded	42.9 (+)	12.40	33
Moderately Retarded	52.0 (+)	4.58	3
Behaviorally Disabled	37.0	9.06	58
Learning/Language Disabled	39.4	11.36	57
Total Special Education Teachers	39.7	11.04	263

Note: A "plus" sign next to a mean indicates that mean is above the overall average age, 39.7, for Special Education teachers.

TABLE 21

MEANS AND STANDARD DEVIATIONS OF YEARS' TEACHING EXPERIENCE OF SPECIAL EDUCATION TEACHING STAFF WITHIN AND ACROSS HANDICAP CATEGORIES
(May 20, 1977)

Handicap	Years' Teaching Experience Mean	Standard Deviation	N
Visually Impaired	18.9 (+)	9.74	4
Hearing Impaired	8.5 (+)	6.92	23
Orthopedically Impaired	6.1	4.14	13
Neurologically Impaired	6.9	4.83	21
Mentally Retarded, Mixed	9.4 (+)	6.99	51
Mildly Retarded	10.2 (+)	5.89	33
Moderately Retarded	10.3 (+)	4.12	3
Behaviorally Disabled	7.4	4.6	58
Learning/Language Disabled	7.3	5.92	57
Total Special Education Teachers	8.3	6.16	263

Note: A "plus" sign next to a mean indicates that mean is above the overall average number of years' experience, 8.3, for Special Education teachers.

average years' experience, while the average age, 39, is somewhat less than the overall average age.

Type of Certification. Table 22 gives the frequency of type of certification within and across handicap categories. The types of certification (Standard, Provisional, and Other) require some explanation. "Standard" refers to a certification that is valid throughout continuance of teaching and seven years thereafter. A Provisionally certificated teacher can be granted Standard certification upon completion of five years' teaching within the State and fulfillment of State educational requirements, including a course in Washington State history. (Twelve out of the 64 Special Education teachers who hold a Provisional certificate are from out-of-state.) Seven of the nine "Other" Special Education certifications are Six-Year Elementary, which is an older certification requiring the holder to take eight quarter hours of courses every six years. Inspection of Table 22 indicates that the majority, 71.9%, of Special Education teachers hold Standard certificates. However, it cannot be inferred that a greater than average within-category percentage of Standard certifications indicates higher instructional quality; a greater percentage is probably primarily due to more years' in-State service.

Education. Table 23 gives highest-degree-held frequencies of Special Education teaching staff within and across handicap categories. As might be noted, there is a large degree of variation about the overall percentage, 33.1%, of Master's degrees across handicap categories. Most notable is the large percentage, 78.3%, of teachers of the Hearing Impaired who hold Master's degrees. On the other hand, a relatively small percentage, 18.2%, of teachers of the Mildly Retarded hold Master's degrees. It would, however, be precipitous to infer a relationship between percentage of Master's holders and instructional quality. Too many other factors (e.g., amount of in-service training, teaching styles, etc.) operate in influencing instructional quality.

TABLE 22

FREQUENCY OF TYPE OF CERTIFICATION WITHIN AND ACROSS HANDICAP CATEGORIES
(May 20, 1977)

Handicap	Type of Certification: Standard	Provisional	Other
Visually Impaired	3 (75.0) (+)	0 (0)	1 (25.0)
Hearing Impaired	20 (87.0) (+)	3 (13.0)	0 (0)
Orthopedically Impaired	9 (69.2)	3 (23.1)	1 (7.7)
Neurologically Impaired	14 (70.0)	6 (30.0)	0 (0)
Mentally Retarded, Mixed	36 (70.6)	13 (25.5)	2 (3.9)
Mildly Retarded	27 (81.8) (+)	5 (15.2)	1 (3.0)
Moderately Retarded	3 (100.0) (+)	0 (0)	0 (0)
Behaviorally Disabled	37 (66.1)	17 (30.4)	2 (3.6)
Learning/Language Disabled	38 (66.7)	17 (29.8)	2 (3.5)
Total Special Education Teachers	187 (71.9)	64 (24.6)	9 (3.5)

Note 1: Unenclosed numbers are raw frequencies and numbers in parentheses are within-category percentages.

Note 2: A "plus" sign next to a percentage indicates that percentage is higher than the overall percentage, 71.9, of Special Education teachers holding a standard certification.

TABLE 23

FREQUENCIES OF HIGHEST DEGREE HELD BY SPECIAL EDUCATION TEACHING STAFF WITHIN AND ACROSS HANDICAP CATEGORIES (May 20, 1977)

Handicap	Highest Degree Held: Bachelor	Master	Doctor
Visually Impaired	4 (100.0)	0 (0)	0 (0)
Hearing Impaired	4 (17.4)	18 (78.3)	1 (4.3)
Orthopedically Impaired	7 (53.8)	6 (46.2)	0 (0)
Neurologically Impaired	14 (66.7)	7 (33.3)	0 (0)
Mentally Retarded, Mixed	31 (60.8)	20 (39.2)	0 (0)
Mildly Retarded	27 (81.8)	6 (18.2)	0 (0)
Moderately Retarded	3 (100.0)	0 (0)	0 (0)
Behaviorally Disabled	39 (67.2)	19 (32.8)	0 (0)
Learning/Language Disabled	45 (78.9)	11 (19.3)	1 (1.8)
Total Special Education Teachers	174 (66.2)	87 (33.1)	2 (0.8)

Note: Unenclosed numbers are raw frequencies and numbers in parentheses are within-category percentages.

Cost per Pupil Enrolled in Special Education

Information on cost per pupil was obtained from the most current (June 30, 1976) District Annual Report. Unfortunately, cost per pupil was not determined for each handicap category, but only for Special Education students overall. Thus it is not possible to make between-category cost comparisons. However, cost per pupil figures are available for regular as well as Special Education for the years 1972 through 1976. Thus it is possible to compare Special with regular education and examine trends over a five year time period. Table 24 summarizes the data, which are also presented graphically in Figure 5.

TABLE 24

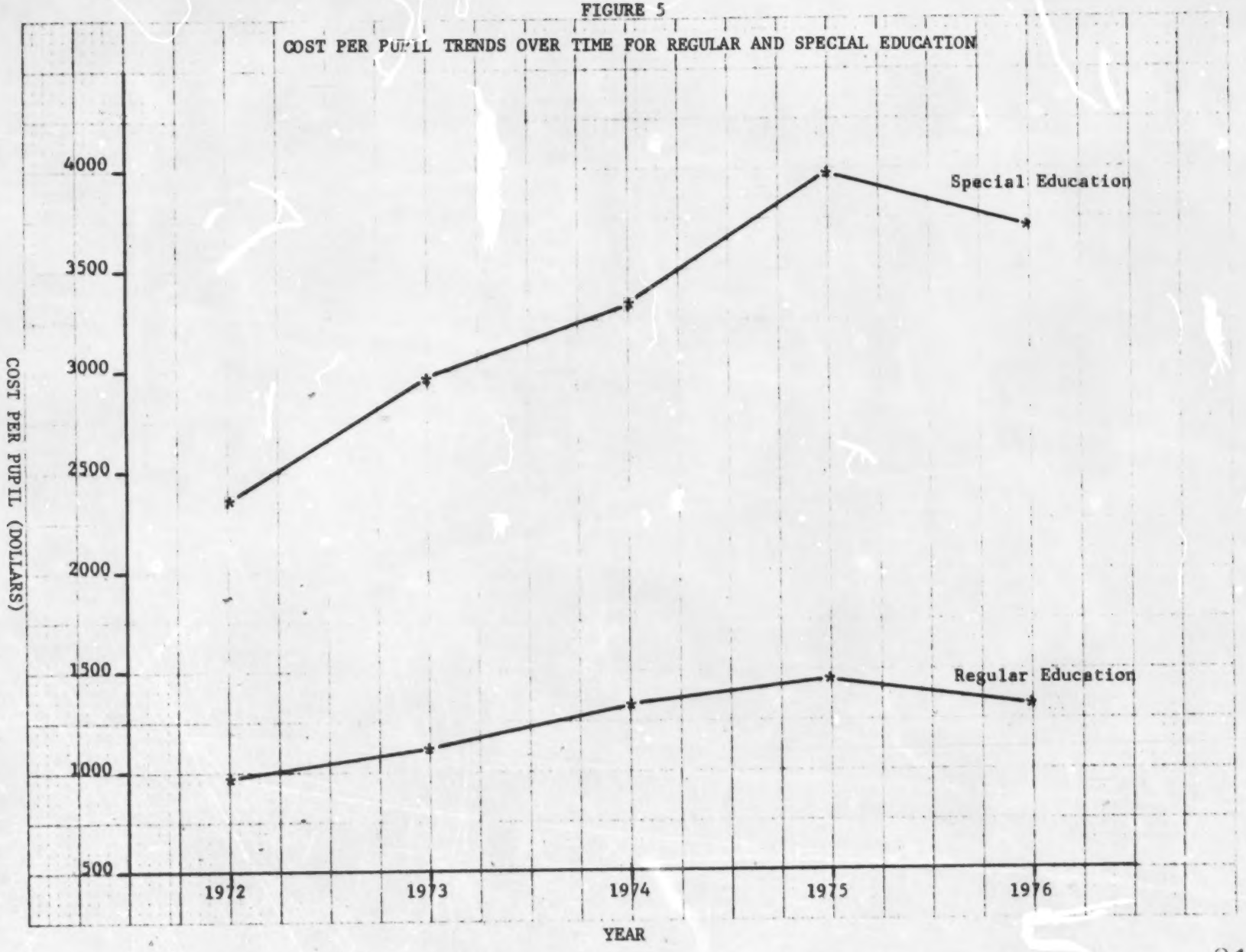
COST (IN DOLLARS) PER PUPIL PER YEAR

Year Ending June 30	Regular Education	Special Education
1972	995	2,360
1973	1,110	2,878
1974	1,275	3,275
1975	1,484	3,941
1976	1,277	3,747

As can be seen in Table 24, the cost per pupil in Special Education is much greater than that in regular education. In fact, the cost per pupil in Special Education is a steadily increasing (over time) multiple of the cost per pupil in regular education. In 1972, the multiple is 2.4; in 1973 and 1974, it is 2.6; in 1975, it is 2.7; and in 1976, it is 2.9. Thus, although there is a decline from 1975 to 1976 in cost per pupil in both regular and Special Education, in 1976 the cost per pupil in Special Education is almost three times that in regular education.

FIGURE 5

COST PER PUPIL TRENDS OVER TIME FOR REGULAR AND SPECIAL EDUCATION



SUMMARY AND RECOMMENDATIONS

Five major objectives were addressed in this study. These objectives will be summarized and the major findings and/or conclusions associated with each will be described in this section.

Objective 1

Current 1976-77 Special Education enrollment figures within and across handicap categories were compared with past years', 1972-73 through 1975-76, enrollment figures.

The overall percent handicapped enrollment increased from 2.9% of the District enrollment in 1972-73 to 5.0% in 1975-76 with a slight decrease to 4.7% in the current year, 1976-77, a decrease probably due to the decline in the Behaviorally Disabled enrollment for this year.

Within handicap categories, the most notable trends over time were for the Multiple Handicapped, Behaviorally Disabled, Mildly Mentally Retarded, and Learning/Language Disabled. When these trends were graphed (Figure 1) as percentages of total handicap enrollment, a steady decrease in the Multiple Handicapped and Mildly Mentally Retarded enrollment could be seen. The Behaviorally Disabled enrollment almost doubled from 1972-73 to 1975-76 and then declined sharply in 1976-77. The Learning/Language Disabled enrollment doubled from 1972-73 to 1976-77, with the greatest rate of increase occurring after 1974-75.

Objective 2

Membership frequencies within and across Special Education categories were sought for selected demographic descriptors. The set of demographic descriptors selected were: (1) sex; (2) ethnic group; (3) family structure (living with both parents versus other); (4) poverty level of residential neighborhood; (5) grade level (elementary versus secondary); (6) age; (7) school of attendance (neighborhood versus other); (8) mode of transportation; (9) geographic concentrations of students in selected handicap categories; (10) number of siblings; (11) referring school; and (12) number and type of previous referrals. In addition, it was of interest to investigate certain psychometric descriptors: (13) most current reading achievement measure; (14) most current mathematics achievement measure; and (15) other psychometric assessment data.

Objective 2 was not fully met, as data on descriptors (10) through (15) were either not available or not in a form suitable for large scale analyses. This unavailability of data points up the need for a more

extensive computerized record-keeping system as well as a standard test battery for Special Education students. Such a system is essential for both status monitoring and program evaluation.

Major findings in terms of descriptors (1) through (9) are summarized below:

1. When compared with the total District ratio of males to females, males outnumber females across handicap categories, and particularly within the categories of Neurologically Impaired, Learning/Language Disabled, and Behaviorally Disabled.

   Recommendation: This finding was left open to interpretation. However, given the variety of ways in which discrimination complaints occur, it is recommended that assessment and placement practices be reviewed for defensibility in these areas.

2. When compared with the total District ratio of Black to non-Black students, Black students are greatly over-represented in the Mildly Mentally Retarded category, and somewhat less so in the Behaviorally Disabled, Learning/Language Disabled and Moderately Mentally Retarded categories.

   Recommendation: In view of an Office of Civil Rights communication, as well as recent Federal legislation, it is recommended that the District conduct a careful review of assessment and placement procedures as they relate to students in these categories.

3. When compared to the total District percentage of students from intact (living with both parents) versus non-intact family structures, more handicapped students come from non-intact family structures.

   Recommendation: This phenomenon was particularly evident in the Mildly Retarded and Behaviorally Disabled categories. Because of the possible relationship between non-intact families and lack of home stimulation of intellectual and emotional growth, it is recommended that particular emphasis be placed upon involving the parent or guardian in the student's educational programming in these cases.

4. When compared with the total District figure, the estimated percent of students coming from homes with annual incomes less than $6,000 was highest for the Moderately and Mildly Mentally Retarded. The interpretation of this finding was that students enrolled in programs for the retarded tend more than other handicapped students to come from poorer homes.

   Recommendation: The recommendation stated under number 3 above is also applicable to this group.

5. When compared with the total District percentage of elementary

versus secondary students, the percentage of elementary level Severely Retarded students is extremely small. A possible (and hopeful) interpretation of this finding is that it reflects the impact of recent medical advantages as well as genetic counseling; i.e., that there has been an actual decline in the birthrate of Severely Retarded children.

Recommendation: None.

Objective 3

A comprehensive description of current Special Education assessment, placement and intervention practices was sought.

Many questions were addressed in attempting to meet this objective. Rather than list each question, only the major findings will be summarized here. Moreover, it should be pointed out that much of the information was obtained through interview so that exact figures and breakdowns by handicap are not available. Thus it cannot be said that Objective 3 was fully met. The major findings related to Objective 3 are summarized below:

1. All students who are made a "focus of concern" receive formal assessment.

2. Approximately one third of those students made a focus of concern are placed in Special Education classes.

3. Very few (approximately 10%) of all students referred for possible Special Education intervention had parents who refused formal assessment. A small minority of students who received Special Education placement had parents who terminated placement.

4. As of April, 1977, all students who receive Special Education placement had individual goals and objectives written for them.

5. Eighty-nine percent of students who receive Special Education placement are placed in self-contained classrooms, as opposed to resource rooms. That this figure is so large has possible implications for future compliance with Federal legislation requiring that handicapped students be placed in the "most normal educational environment."

It was also desired to determine the percentage, by handicap, of Special Education students who are suspended or expelled or who drop out of school. Unfortunately these data could not be obtained since records kept (manually) do not always identify whether or not a student is in Special Education. Again, the need for a computerized record-keeping system was evident.

Recommendation: A computerized data storage and retrieval system should be developed to include, as a minimum, ready (one-day) access to the following information on each student:

a. Standard descriptive and demographic data.

b. Special Education and other program placement history.

c. Indicators for the occurrence of all compliance-related transactions.

d. Standard basic assessment battery measures.

e. Ongoing standard performance measures.

Objective 4

A description of the Special Education teaching staff in terms of selected demographic characteristics, experience and educational background was sought. The demographic descriptors were sex, ethnic group, and age; experience was defined in terms of years of teaching (within Washington State) experience and type of certification; educational background was defined in terms of highest degree held.

The major findings associated with Objective 4 are summarized below:

1. When compared with total District teacher ratio of males to females, there is a moderate under-representation of male teachers in Special Education, particularly in the Learning/Language Disabled category. In contrast, the percentage of male teachers in the Behaviorally Disabled was comparatively large. This was interpreted as a reflection of a tendency to place male teachers with more physically mature disturbed students.

2. When compared with the total District teacher percentages of White, Black, and other minorities, there appears to be an over-representation of White teachers with a corresponding under-representation of Black and other minority teachers in Special Education.

3. There is large between-handicap-category variation in the percentage of teachers holding a Master's degree. The largest percentage is for teachers of the Hearing Impaired and the smallest percentage is for teachers of the Mildly Retarded. It was suggested, however, that caution be exercised in attempting to relate percentage of Master's holders and instructional quality; too many other factors operate in influencing instructional quality.

Objective 5

It was sought to determine the current cost per pupil enrolled in each Special Education program.

Objective 5 was only partially met since separate figures were not

available for each handicap category. However, cost per pupil figures were available for regular and Special Education (over all categories) for the years 1972 through 1976. Thus it was possible to compare Special with regular education over a five-year time period.

The major finding associated with Objective 5 is that the cost per pupil in Special Education is a steadily increasing (over time) multiple of the cost per pupil in Special Education.

Recommendation: Since program cost-effectiveness is an increasingly important pursuit in Special Education as well as other District areas, it is recommended that a budget structure be developed which allows precise analysis of per student costs in terms of meaningful program units.